Giant Lipoma as an Unusual Cause of Obscure Gastrointestinal Bleeding

C Spada, S Alfieri, B Barbaro, P Familiari, L Minelli Grazioli, and G Costamagna, Catholic University, Rome, Italy

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Abstract

Small bowel lipomas are rare gastrointestinal (GI) benign neoplasms, representing approximately 2–3% of nonmalignant tumors of the intestinal tract. They are usually asymptomatic. However, lesions exceeding 2 cm in diameter can cause nonspecific clinical manifestations or symptoms. When symptoms are clinically present, one of the most common is obscure GI bleeding. Capsule endoscopy is the first-line diagnostic tool in most cases with obscure GI bleeding. Recently, a video capsule for colon evaluation (second-generation colon capsule endoscopy (CCE2)) has been released (PillCam Colon; Given Imaging, Yoqneam, Israel) that potentially offers the opportunity to explore both the small bowel and the colon during one examination. Here is demonstrated capsule endoscopy visualization of a giant lipoma that caused a long-standing obscure GI bleeding. This article is part of an expert video encyclopedia.

Keywords

Capsule endoscopy; Colon capsule endoscopy; Giant lipoma; Small bowel; Video.

Video Related to this Article

Video available to view or download at doi:10.1016/S2212-0971(13)70099-2

Material

Second-generation colon capsule endoscopy (CCE2): PillCam Colon; Given Imaging, Yoqneam, Israel.

Background and Endoscopic Procedure

Tumors of the small intestine account for 1–2% of all GI tumors, and benign tumors account for approximately 30% of all small-intestinal tumors.[1] Although lipomas are the most common benign mesenchymal tumors found in the GI tract, small-bowel lipomas are rare GI benign neoplasms, representing approximately 2–3% of nonmalignant tumors of the intestinal tract.[1] Signs and symptoms of small-bowel lipomas are often vague. Small lipomas are usually asymptomatic and clinically not relevant. Lesions exceeding 2 cm in diameter can cause nonspecific clinical manifestations or symptoms. When symptoms are clinically present, one of the most common is obscure GI bleeding. Intussusception can also occur, although rarely, and requires surgery. It might be difficult to make a precise preoperative diagnosis in the absence of evident signs. Definitive diagnosis can only be made through histopathological examination after the surgical resection.

Capsule endoscopy is the first-line diagnostic tool in case of obscure GI bleeding. Small-bowel capsule is now a well-recognized endoscopic technique for small bowel evaluation. Recently, a video capsule for colon evaluation (PillCam Colon; Given Imaging, Yoqneam, Israel) has been released. A second-generation PillCam, CCE2, is now available.[2,3] This evolution of the colon capsule offers some advantages over the first generation. It has two imagers with a much wider angle of view, which has been increased to 172° for each imager, allowing a nearly 360° coverage of the colon. Furthermore, in order to enhance colon visualization and to save battery energy, the capsule is equipped with an adaptive frame rate. This represents a major progress over the previous version. CCE2 captures 35 images per second when in motion and 4 images per second when it is virtually stationary. To further save battery energy and allow automatic identification of the small bowel, instead of going into a 'sleep' mode the CCE2 continues to work at a low rate of only 14 images per minute until small bowel images are detected, then switching into the adaptive frame rate. The automatic recognition of the small bowel also allows a high frame rate visualization of the small intestine from the moment of the recognition to the passage of the capsule into the duodenum. A 'manual' activation of CCE2 is also possible before capsule ingestion. With the CCE manually activated, the whole gut is visualized with the capsule working in an adaptive frame rate mode. Using this feature, although the CCE2 has been specifically designed to explore the colon, it is also able to visualize the small bowel and, therefore, it potentially offers the opportunity to explore both small bowel and colon during one examination.

Here is reported a case of long-standing, obscure, and persistent GI bleeding in a 62-year-old gentleman. During the last five years the patient underwent two gastroscopies and two colonoscopies, all resulting normal. Fecal immunochemical tests were persistently positive. During the last colonoscopy, exploration of the entire colon was incomplete because of tortuosity of the colon. Patient was indicated to have capsule endoscopy. To explore the small bowel and complete the evaluation of the portions of colon that had not been explored

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during the last colonoscopy, a second-generation PillCam CCE was performed. In the distal part of the small bowel a >20-mm protruding lesion was observed. An intussusception was suspected. Colonoscopy resulted normal, apart from the presence of diverticula in the left colon. A computed tomography-enterography was indicated and revealed a 3.6×2.8 cm very hypodense,fat-like tissue (density – 60/70 HV), pedunculated lesion, with a concomitant intussusception. A 25-cm long laparoscopic resection of the ileum, including the mass and an intussusception, was performed. The results of the subsequent histopathological examination of the resected specimen confirmed an intestinal lipoma.

Key Learning Points/Tips and Tricks

- Giant, small-bowel lipomas are a rare, benign neoplasm, but potentially clinically relevant.
- Obscure GI bleeding and intussusception are the most frequent clinical presentations in case of giant (>2 cm) small-bowel lipomas.
- Capsule endoscopy is usually indicated in such cases to rule out the cause of bleeding.
- Second-generation of CCE (PillCam Colon 2) offers the possibility to explore both the small bowel and the colon.

Scripted Voiceover

Time (min:sec)	*Voiceover text*
00:06	A 62-year-old gentleman, without any relevant comorbidity, was admitted with a 5 year history of iron deficiency anemia of unknown origin. For this reason, during the last 5 years the patient received several blood transfusions. Fecal Immunochemical Tests were persistently positive. He underwent two gastroscopies and one push enteroscopy. Two colonoscopies were attempted but results were incomplete because of the tortuosity and poor patient compliance. The colon was explored up to the hepatic flexure. No relevant findings were diagnosed in the portions explored, apart from sigmoid diverticula, without signs of inflammation or bleeding. The site of the bleeding was never identified.
01:01	Since the patient had a recent incomplete colonoscopy, it was decided to perform a second-generation colon capsule endoscopy to explore both the colon and the small bowel. The capsule was manually activated in the adaptive frame rate mode before the ingestion.
01:11	The patient was asked to follow the recommended regimen of preparation for colon capsule endoscopy. Briefly, it consists of a split regimen of polyethylene glycol solution (2 l the day before and 2 l on the morning of examination) and an additional low dose of sodium-phosphate boosters.
01:25	The cleansing level of the small bowel was adequate. No significant findings were observed in the proximal small bowel, whilst, in the distal part, a protruding lesion partially occupying the lumen was observed. The mucosal surface of the lesion was irregular and erythematous with a large roundish mucosal pattern. No signs of bleeding were observed. The lesion was bigger than 20 mm in dimension. An ileo-ileal intussusception was suspected.
02:03	Capsule-colonoscopy results were normal, apart from the presence of diverticula in the left colon.
02:12	In order to further localize and define the tumor, an entero-computed tomography was performed and revealed a 3.6×2.8 cm pedunculated mass in the ileum. The lesion was hypodense, with a fat tissue-like density. A concomitant intussusception was confirmed.
02:22	The patient underwent a laparoscopy. A 10 cm intussusception was identified in the ileum. The intussuscepted bowel segment was resected en bloc.
02:26	Inspection confirmed the presence of a 3 cm pedunculated and ulcerated mass. The final pathology was consistent with lipoma.
02:32	Small lipomas are usually asymptomatic and not clinically relevant, they might present symptoms if of large dimensions. In this case, the lipoma was diagnosed as a protruding lesion with an erythematous and large roundish mucosal pattern.
02:47	This endoscopic pattern is comparable to that of another case from our center.
02:54	Giant, small bowel lipomas are a rare, benign neoplasm, but potentially clinically relevant. Obscure gastrointestinal bleeding and intussusceptions are the most frequent clinical presentation of giant small bowel lipomas. Capsule endoscopy is usually indicated in such cases to rule out the cause of bleeding. Second generation Colon Capsule Endoscopy offers the possibility to explore both the small bowel and the colon.

References

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